Choosing a Vocation

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How many boys, on graduation from High School, who purpose going to College, have a definite knowledge of the profession which they wish to enter, its requirements and rewards? I will venture the guess that not half the young men who enter the University have definite ideas as to the goal which they wish to reach, and that the choice of a course is largely a matter of chance or whim. Your chum is going to take an engineering course and, not wishing to be separated, you take engineering. Or you have heard it rumored that Mr. Smith has made a fortune and he is an engineer (although probably he did not make his money at engineering) therefore you choose an engineering course.

This most important step of a lifetime is thus too often taken without serious consideration. I know because I was one who started wrong and changed my course later.

The most important point to be considered in selecting a vocation is your natural inclination. No man ever made a marked success in any work which he did not enjoy. The opportunities for success in almost any line are sufficient, if the man is more interested in his work than he is in the pay which he receives for it. In engineering work, opportunities for advancement come about as rapidly as the man is capable of taking advantage of them.

Before selecting an engineering course, a young man should understand the requirements and know the nature of the work which will occupy his time after he graduates. If this work does not appeal to him as the *most interesting thing in the world,* he should seek some other field where he can find pleasure in his work.

Mr. A. J. Himes defines Engineering as:

"The practical application of mathematical and physical science to the needs of man."

Quoting further from Mr. Himes:

"The engineer makes the plan, determines the size and dimensions of the structure or machine, provides for its safe and successful operation and estimates its cost and earning capacity. Before the first move to create the structure, it has been completely formed in the brain of the engineer." Thus the engineer is essentially a dreamer. He must have a keen imagination and a thorough knowledge of mathematics and the laws of physics in order to be sure of the practicability of what he proposes.

The processes by which these ends are attained are usually slow and involve much hard labor at the desk and over the drawing table and frequently this work is tedious and uninteresting unless the worker has a vision of the ultimate result and is interested in its attainment.

The first year of all engineering courses at the University has been made uniform with the idea of giving the student this time to investigate the various fields and decide definitely upon the course which he wishes to pursue.

Every freshman engineer should consult with some older person who has a knowledge of the various fields of engineering, and endeavor to get acquainted with the nature of the requirements and work in each, so that he may thus be enabled to make a more intelligent selection. He should, if possible, visit engineering works in each of the fields in which he feels an interest and attempt to gain a first hand knowledge of the conditions under which he would have to work and of the nature of the work that he would be expected to perform.

Every young engineer after graduation must expect to pass through an apprenticeship of several years, during which time he will probably not reap the rewards of a brick layer or a plumber, but he should remember that this is an essential part of his schooling and that his final success depends largely upon what he learns these first years out of college.

There are eight different courses offered in the University leading to degrees in engineering and in each of these departments there are a number of different branches in which one may specialize to a limited extent. Much specialization is not encouraged, as it is thought best for the student to gain a through knowledge of the fundamentals of engineering in his four year course and that specialization can then much more advantageously be taken up either as post graduate work in college or, more usually, by study outside of working hours after graduation. The successful engineer never ceases to be a student.

Rich financial rewards are seldom reaped by the engineer for strictly engineering work. The larger returns usually go to the persons who direct the business and sales departments, but there is no better training for an executive than an engineering apprenticeship as is evidenced by the fact that the presidents of some of our greatest railroads and the chief executives of our greatest industries have risen from the ranks of the engineering profession.

Unremitting toil is the watchword of success in engineering perhaps more than in some other fields; but the labor is lightened by the knowledge that something is growing under our hands, something is being created out of our brains and that we are making the world a better place to live in.

> "How often we trust our lives to the faithfulness of some stoop shouldered man at a brightly lit drawing board, to the care of a riveter hammering away between earth and sky, to the keenness of an iron worker sweating through a steel mill-and how seldom it is that they fail! The engineers are in the trenches of our civilization, they don't do much of the parading nor march gaily after brass bands, but the rest of us live in what security our habits will allow us behind the battle line aginst nature which they maintain."